STEVE SIMMONS
GBB President

• Over 35 years of experience leading solid waste management and renewable energy infrastructure projects in the environmental and energy services sectors.

• Steve has worked with leading international energy operating companies and engineering/consulting firms and is highly experienced in:
  • Program and project management
  • New business development, business financial modeling, and profit and loss management
  • Waste and power marketing
  • Technology evaluation
  • Facility design, procurement, and construction

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GBB Vision

A world where discarded materials are used as resources rather than wasted
We All Know Recycling is Challenging Now

Worldwide crisis in recycling markets hits Broward | Opinion

Challenges facing Florida’s Recyclables Market:

- Pressure on MRF Operators and Waste Haulers to increase quality of recyclables
- Downward pressure on recyclables Prices
- Oversupply of regional recyclables markets
- Higher Municipal Recycling Contracts

What is Needed to Increase Landfill Diversion Rates?

- Sustainable Materials Management Programs
- New Markets
- New Technologies
- Cooperative/Regional Approaches
### A New Class of Waste Conversion Facilities Started Commercial Operation in 2019

<table>
<thead>
<tr>
<th>Facility</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entsorga West Virginia</strong></td>
<td>This facility began commercial operations in May 2019 in Martinsburg, WV. It is located on a closed landfill site and produces a solid fuel for a local cement manufacturing facility.</td>
</tr>
<tr>
<td><strong>RePower South</strong></td>
<td>This facility is in Monks Corner, SC and began operations in 2019. Two facilities create renewable fuel products for use as a coal substitute.</td>
</tr>
<tr>
<td><strong>Fiberight, LLC</strong></td>
<td>This facility is located outside of Bangor, ME. In 2019, they began operation of a facility to 180,000-ton per year recover and produce an array of products.</td>
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</tbody>
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Conversion Technology Overview: Mechanical-Biological Treatment

• Mechanical-Biological Treatment Technology (MBT) encompasses a broad array of technologies which use mechanical and biological processes to recover valuable recyclables, stabilize organic material, recover energy, and produce products for sale.

• MBT facilities are widely adopted in the European Union where they recover recyclables and produce Solid Recovered Fuel (SRF) which may be used as a substitute for coal.

• Large industrial firms, such as cement manufacturers, utilize SRF as a component of their corporate sustainability plans.
Conversion Technology Overview: Entsorga West Virginia - Martinsburg, WV

**Facility**
- **Processing Capacity Max:** ~ 500 tpd of MSW
- **Recoveries:** Metals
- **Product:** Solid Refined Fuel (SRF)

**Economics**
- **Investment:** $50 million
- **Tipping fees:** ~ $50 per ton
Conversion Technology Overview: RePower South - Moncks Corner, SC

**Facility**
- **Processing Capacity Max:** ~ 600 tpd of Mixed Waste
- **Recoveries:** Traditional Recyclables (Plastics, Metals, OCCs)
- **Product:** ReEngineered Feedstock Fuel (ReEF)

**Economics**
- **Investment:** ~ $55 million project
- **Tipping fees:** $38 per ton

Sources: Investor Webinar: “RePower South Berkeley LLC Berkeley County, South Carolina MRRF Facility”
Conversion Technology Overview:
Cement Kilns In Florida

Graphic adopted from Portland Cement Association

Conversion Technology Overview:
Coastal Resources of Maine /Fiberight- Bangor, ME

Facility

• Processing Capacity Max: ~ 600 tpd of MSW
• Recoveries: Traditional Recyclables (Plastics, Metals, OCCs)
• Products: Fiber Pulp, Renewable natural gas, Solid recovered fuel

Economics

• Investment: $70 Million
• Tipping fees: ~ $70 per ton
Recovered Material End Market Examples: Georgia-Pacific (GP), LLC Toledo, Oregon (start up 2021)

**Process**
- Juno Technology

**Application**
- Recycling technology at GP mill that recovers fibers mixed waste to make paper-based products.

**GP Paper Mills in Florida:**
- Hasford- O5B
- Palalka - Paper
- Perry- Foley Cellulose

*Image courtesy of Georgia Pacific (GP)*

Recovered Material End Market Examples: AeroAggregates - Eddystone, PA

Feedstock
- MRF glass

Process
- Ultra-Lightweight Foamed Glass Aggregates (ULF)

Application
- Foaming waste glass used for durable construction material
Recovered Material End Market Examples:
Continuus Material Recovery, LLC – Philadelphia PA

**Feedstock**
- Mixed paper
- Non recyclable plastics

**Process**
- Continuus EVERBOARD™ Roof Cover Board

**Application**
- Building materials created from recovered mixed paper and plastic
A Regional Approach: Sustainable Business Parks

- **Sustainable Business Parks**, known by several names:
  - Recovery Parks,
  - Eco-Industrial Parks (Eco Parks)
  - In academic circles: Industrial Symbiosis or Industrial Ecosystem

- **Key Characteristics:**
  - Business plan that creates a campus where companies/industries are next to solid waste processing facilities
  - Facilities use each other’s by-products as inputs

*Image courtesy of Kent County Department of Public Works*
Thank you!

For more information, contact:

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